

What is claimed is:

1. A method of manufacturing a water soluble composition adapted for subsequent solubilizing and application to agricultural crops, comprising the steps of:

5 mixing a divalent metal salt, citric acid and sodium citrate to obtain a mixture having a moisture content of from approximately 10% to 1.25% by weight; and

processing the mixture in a drying environment to obtain a product which is partially chelated and has a moisture content less than that of the mixture prior to processing.

2. The method of claim 1 wherein the drying environment has a temperature of from approximately 120°F to approximately 150°F.

3. The method of claim 1 wherein the drying environment has a temperature of from approximately 120°F to approximately 150°F and wherein the mixture processing step includes the step of:

5 maintaining the mixture in the drying environment for from approximately 50 seconds to approximately 70 seconds.

4. The method of claim 3 wherein the moisture content of the product is approximately 5% to approximately 0.25% by weight of the product.

5. The method of claim 1 wherein the moisture content of the product is approximately 1.25% to approximately 0.5% by weight of the product.

6. The method of claim 1 wherein the product has an average particle size and the method further comprises the steps of:

grinding the product to reduce the average particle size of the product;

5 placing the ground product in a container; and
hermetically sealing the container.

7. The method of claim 1 wherein the divalent metal of the divalent metal salt is selected from the group consisting of iron, copper, zinc and manganese.

8. The method of claim 7 wherein the drying environment has a temperature of from approximately 120°F to approximately 150°F.

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9. The method of claim 7 wherein the mixture has a total moisture content of from approximately 1.5% to 1.25% by weight of the mixture and the partially chelated product has a total moisture content by weight of from approximately 0.5% to approximately 1.25% of the product.

10. The method of claim 9 wherein the product has an average particle size and the method further comprises the steps of:

grinding the product to reduce the average particle size of the product;

5 placing the ground product in a container; and
hermetically sealing the container.

11. The method of claim 10 wherein method further includes the step of:

maintaining the mixture in the drying environment for from approximately 50 seconds to approximately 70 seconds.

12. The method of claim 7 wherein the moisture content of the product is from approximately 1.25% to approximately 0.5% by weight of the product.

13. The method of claim 1 wherein the drying environment has a temperature of from approximately 120°F to approximately 150°F and wherein the mixture processing step includes the step of:

5 processing the mixture in a continuous flow, fluidized bed drying
for from approximately 50 seconds to approximately 70 seconds.

14. The method of claim 1 further comprising the step of:
reacting the product with an aqueous solution to further chelate
the product.

15. The method of claim 14 wherein the aqueous solution contains
a fertilizer material which is not a chelated product

16. A water soluble composition adapted for subsequent solubilizing
and application to agricultural crops, comprising a partially chelated mixture of
a divalent metal salt, citric acid and sodium citrate, wherein the partially
chelated mixture has a moisture content of at most 1.25% by weight of the
5 mixture.

17. The composition according to claim 16, wherein the divalent

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metal of the divalent metal salt is selected from the group consisting of iron, copper, zinc and manganese.

~~19~~ 18. The composition according to claim ~~18~~¹⁷, wherein the partially chelated mixture has a moisture content of at most 0.5% by weight of the mixture.

19. The composition according to claim 18, wherein the divalent metal of the divalent metal salt is selected from the group consisting of iron, copper, zinc and manganese.

~~14~~ 20. The partially chelated product produced in accordance with the process of claim 1, wherein the divalent metal is selected from the group consisting of iron, copper, zinc and manganese.

~~15~~ 21. The partially chelated product of claim ~~20~~¹⁴, wherein the partially chelated product has a moisture content of from 0.5% to 1.25%.

~~16~~ 22. The partially chelated product of claim ~~20~~¹⁴, wherein the mixture has a moisture content of from 1.25% to 5% by weight of the mixture.

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